

Fig. 1

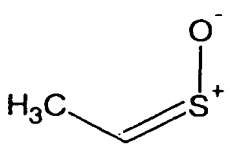
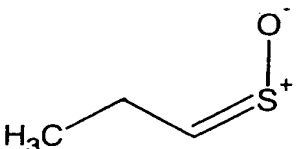
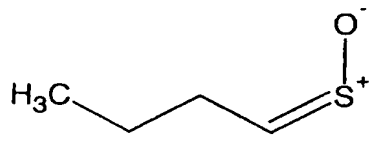
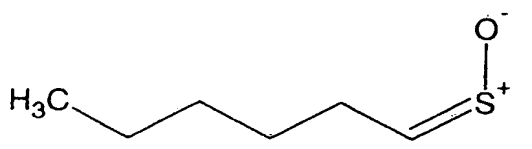
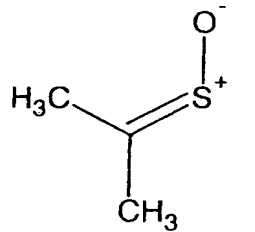
No.	structure	lachrymatory property
(1)		+ Thioethanal <i>S</i> -Oxide
(2)		+ Thiopropanal <i>S</i> -Oxide
(3)		+ Thiobutanal <i>S</i> -Oxide
(4)		+ Thiohexanal <i>S</i> -Oxide
(5)		- Thioacetone <i>S</i> -Oxide

Fig. 2

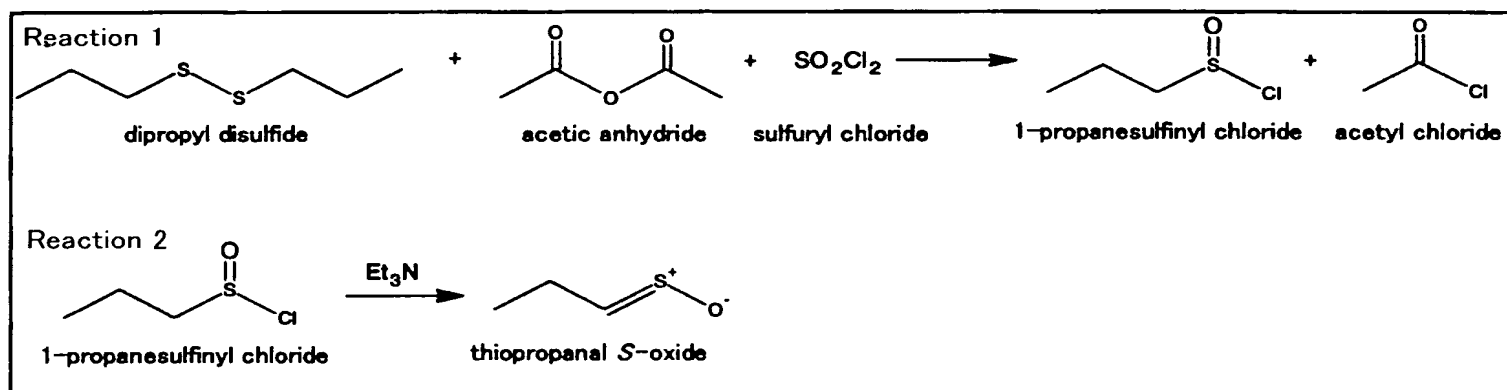


Fig. 3

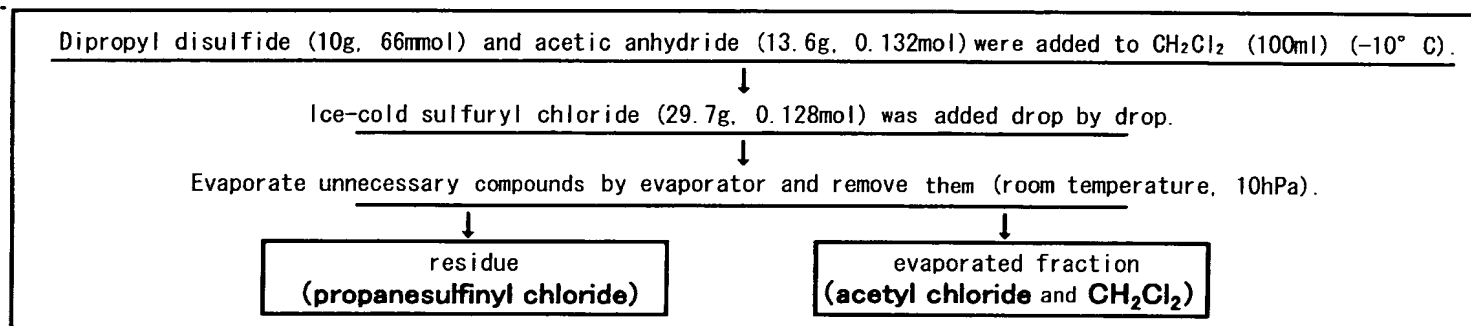
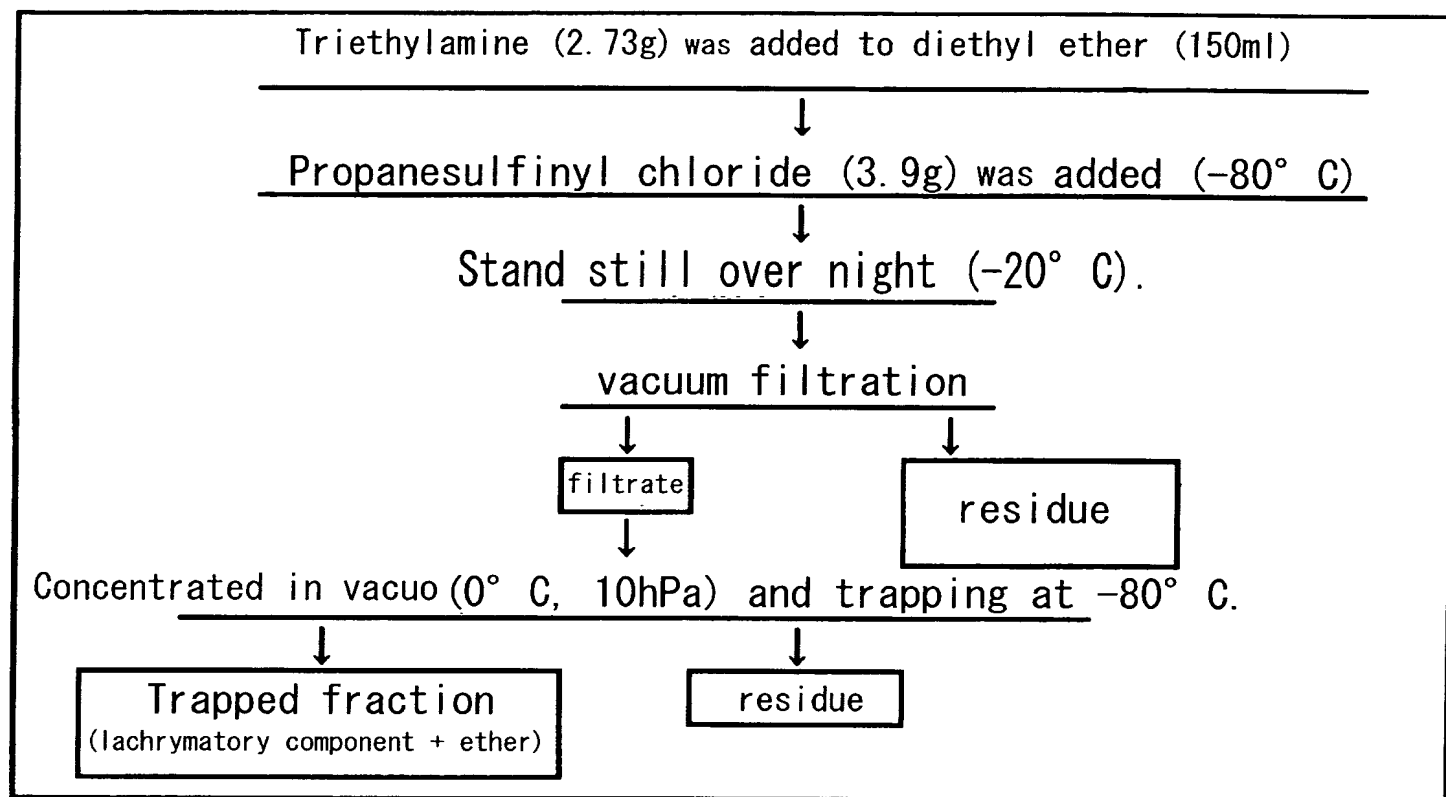


Fig. 4



2



Fig6

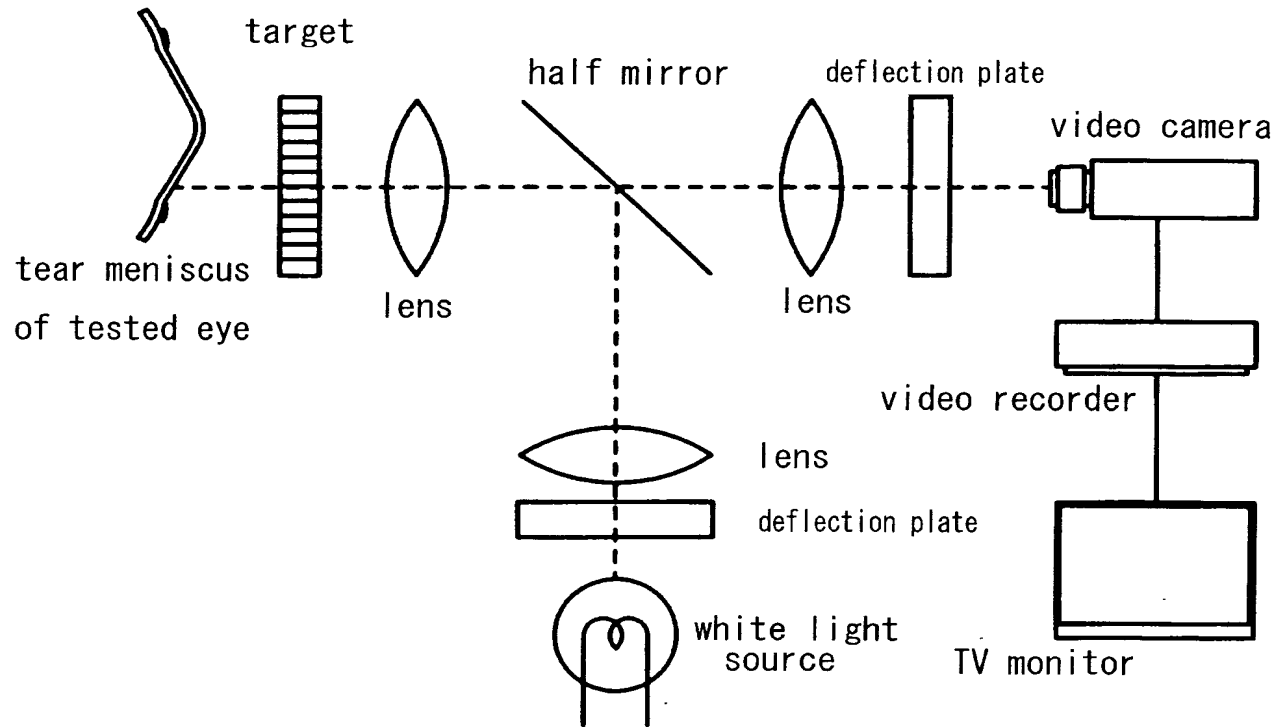


Fig. 7

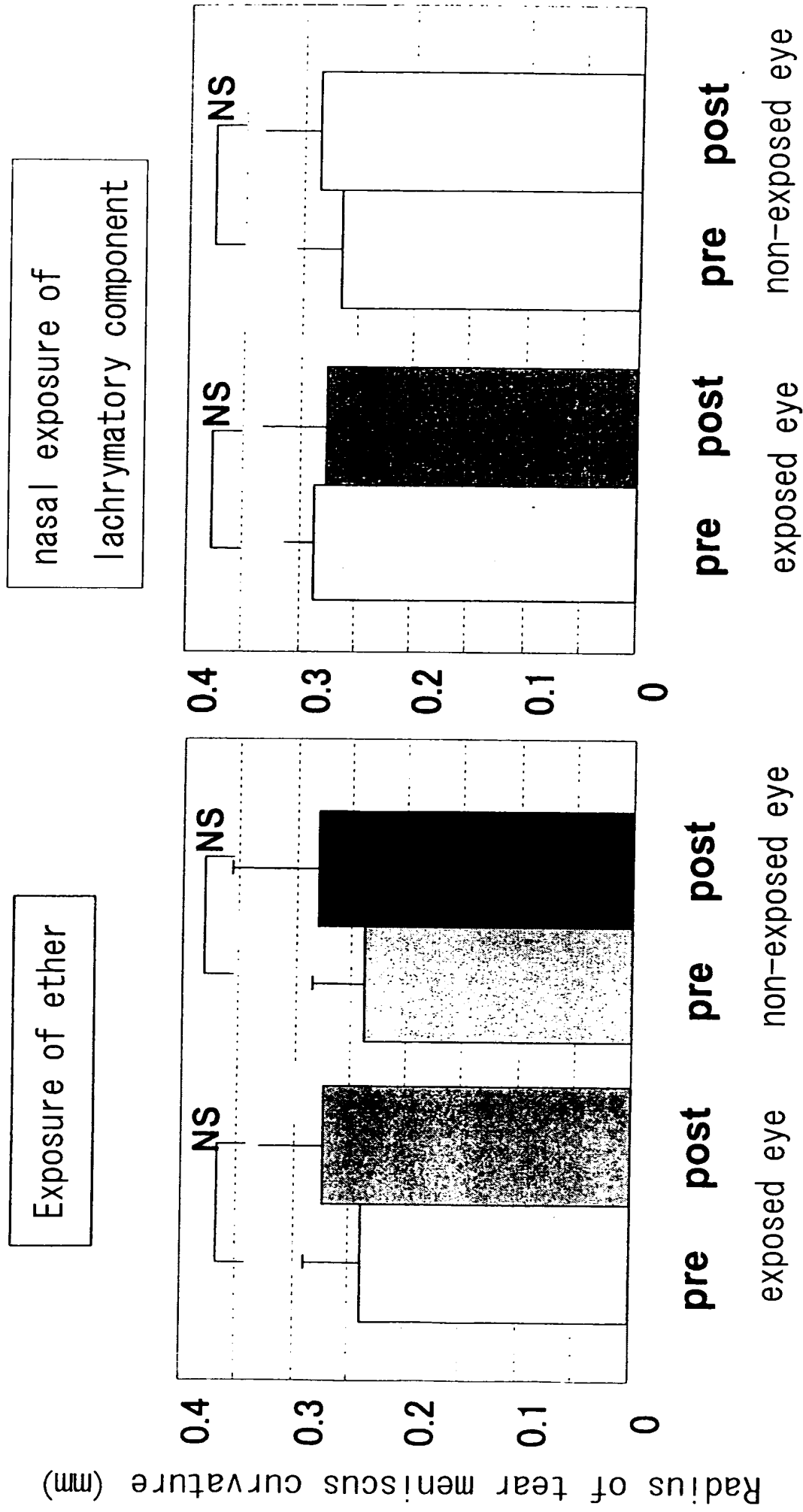
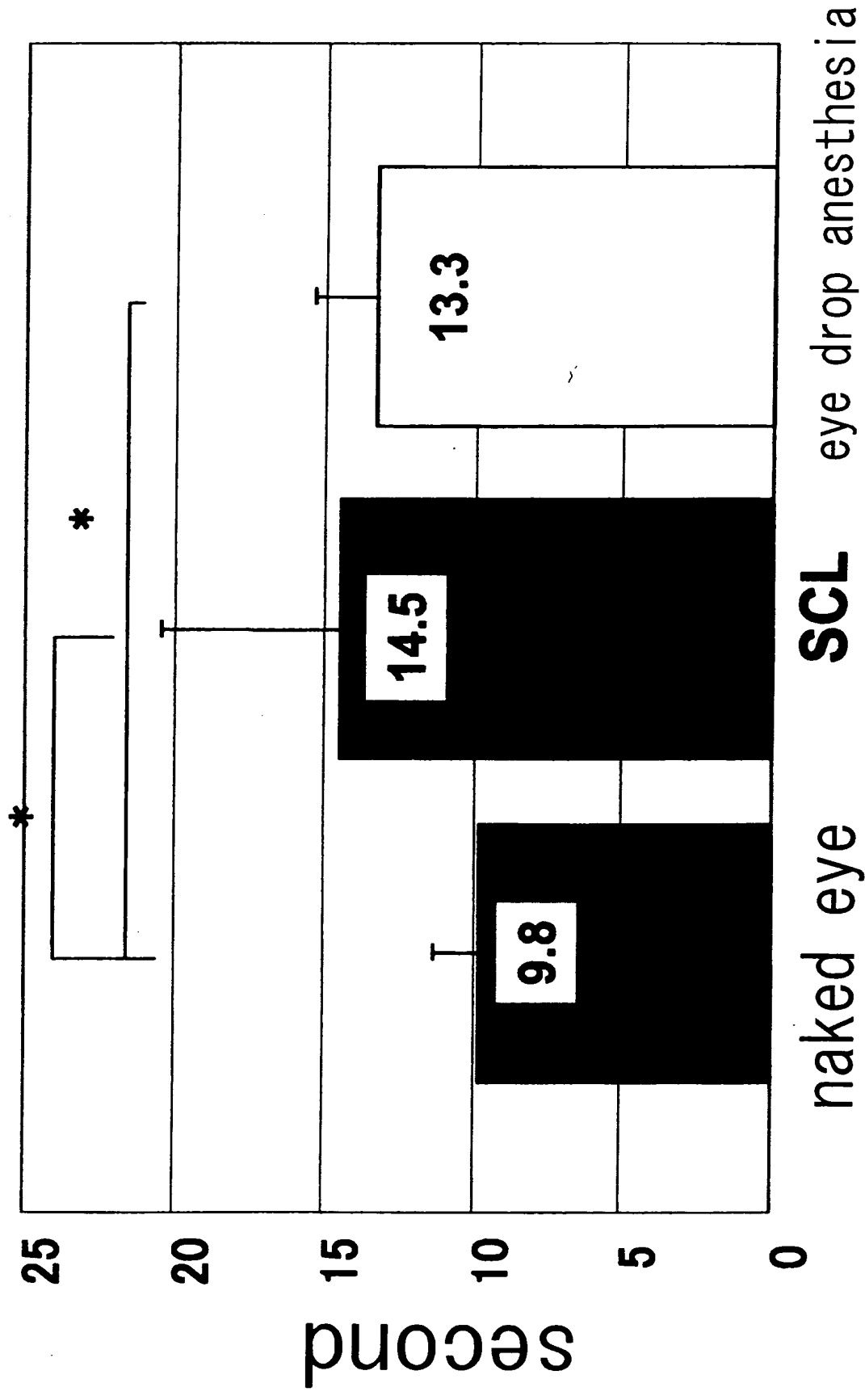


Fig. 8



*** : $P < 0.05$ (Kruskal Wallis)**

Fig 9

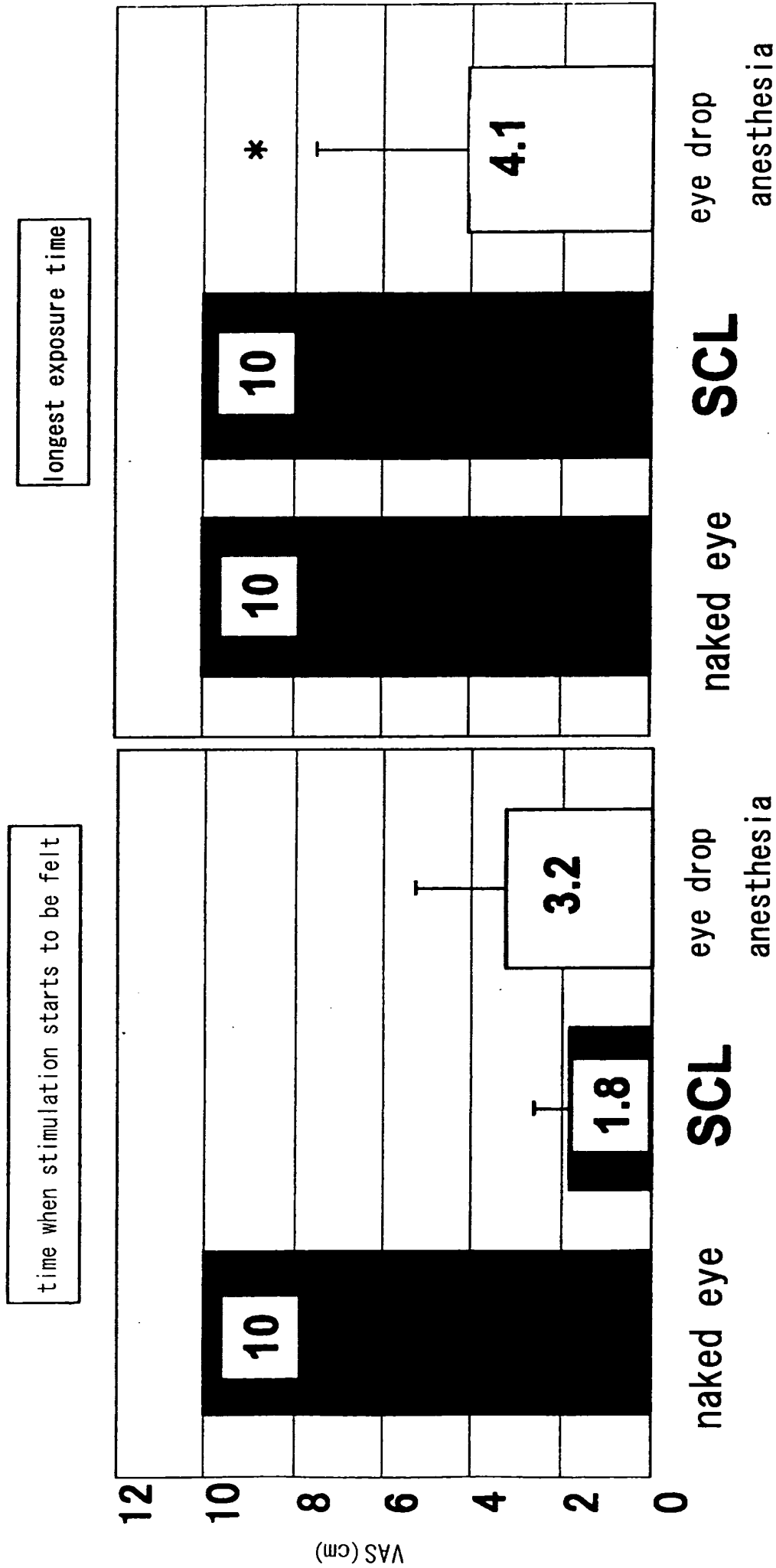


Fig. 10

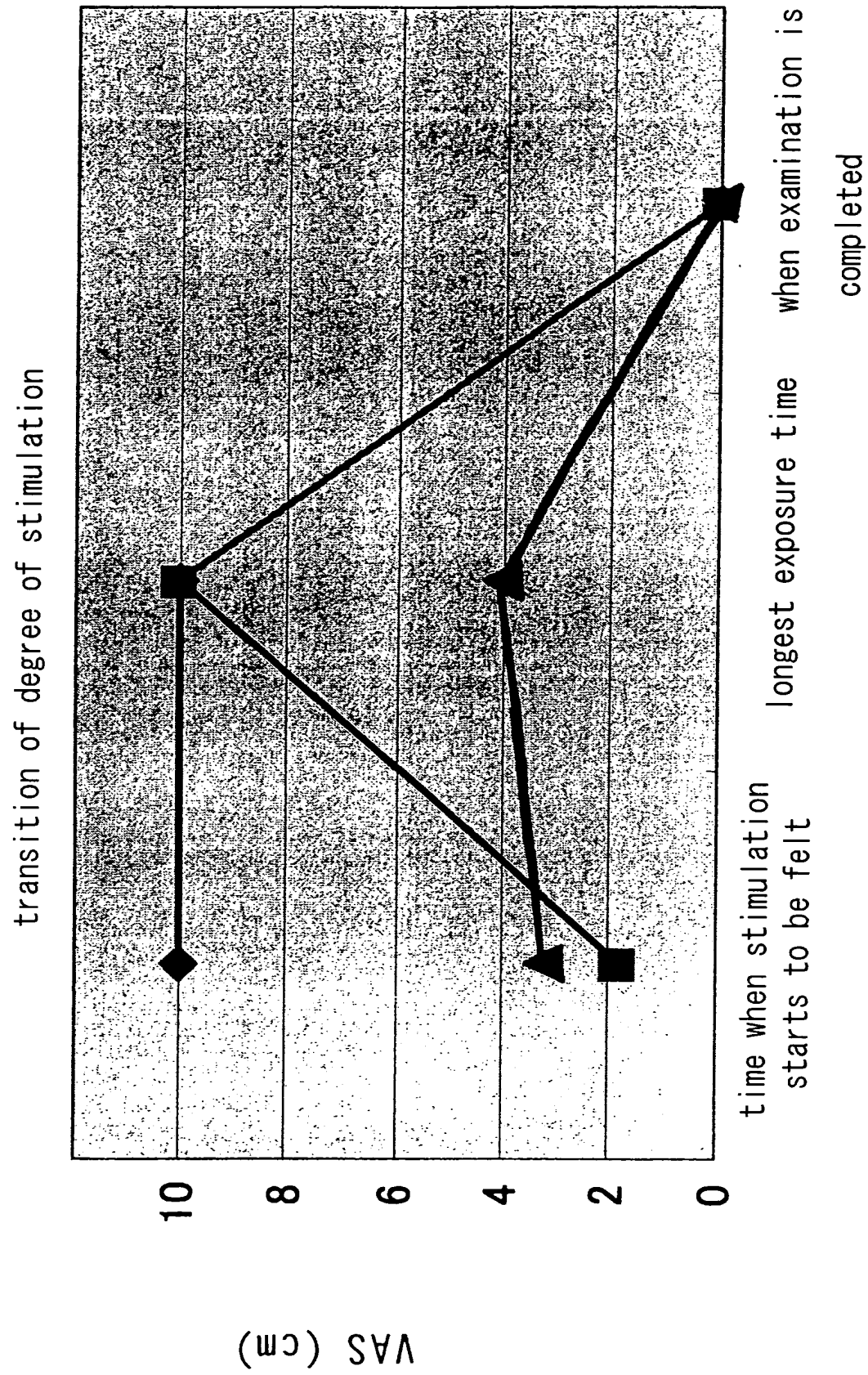


Fig. 11

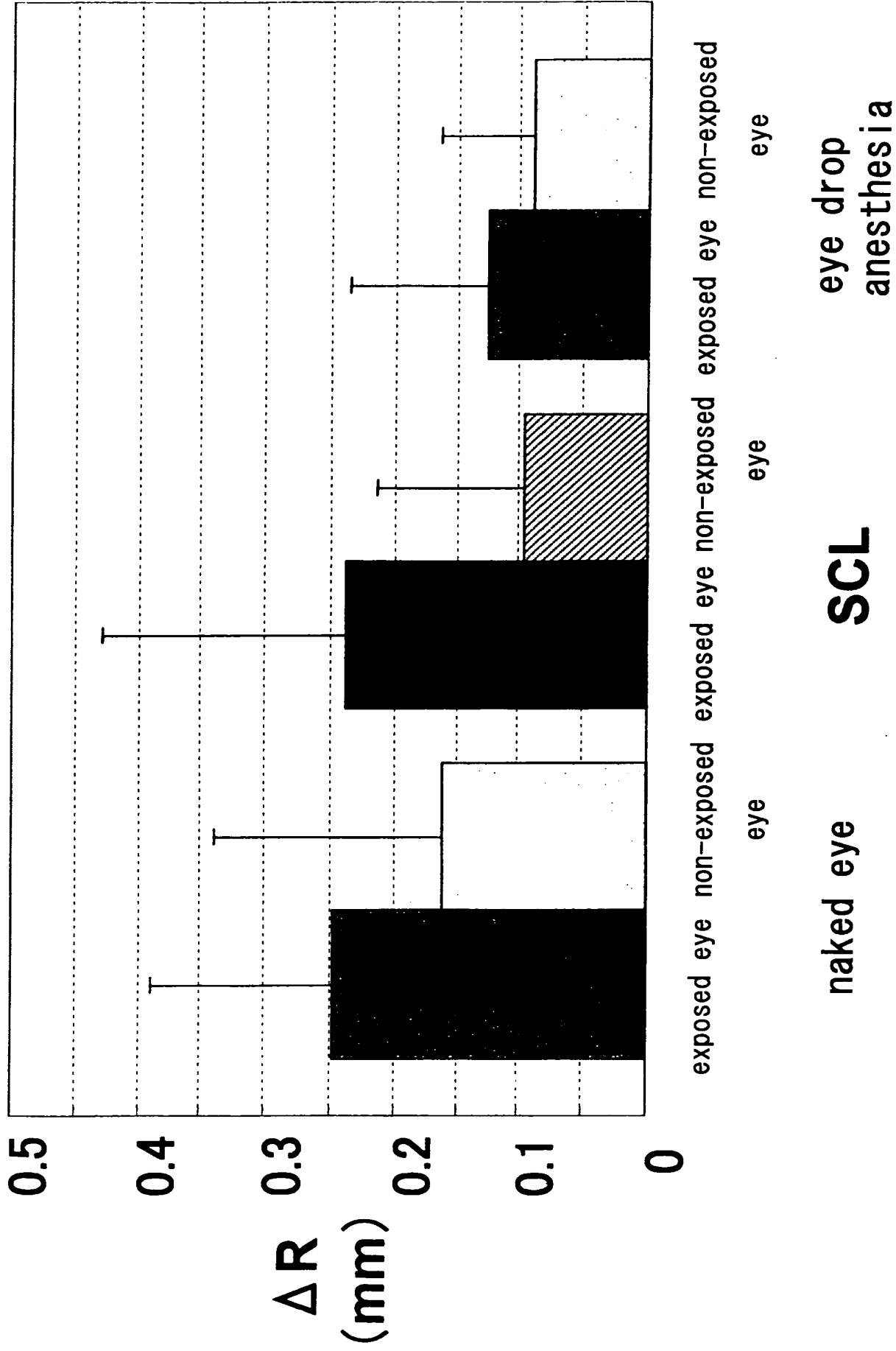


Fig. 12

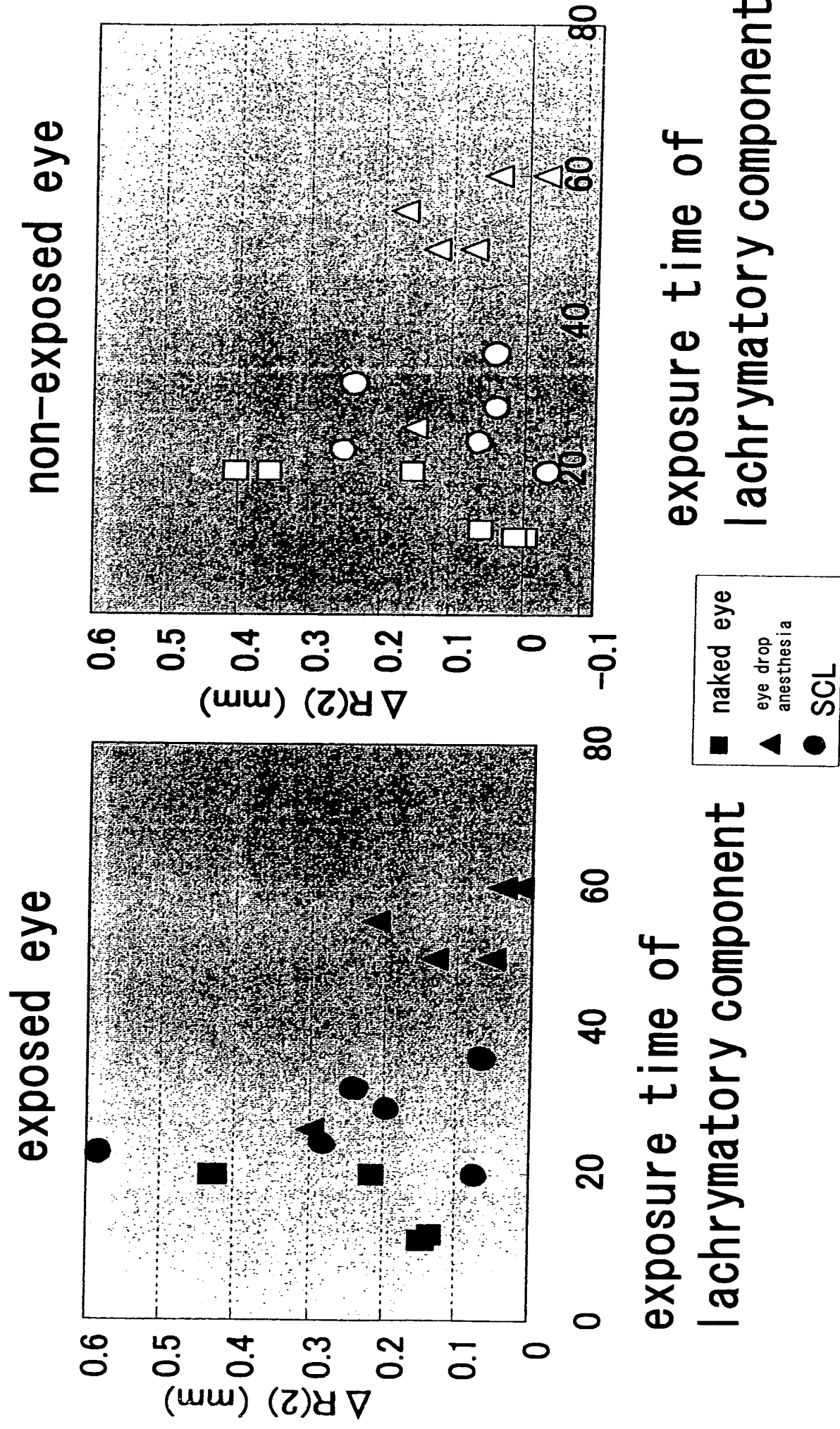


Fig. 13

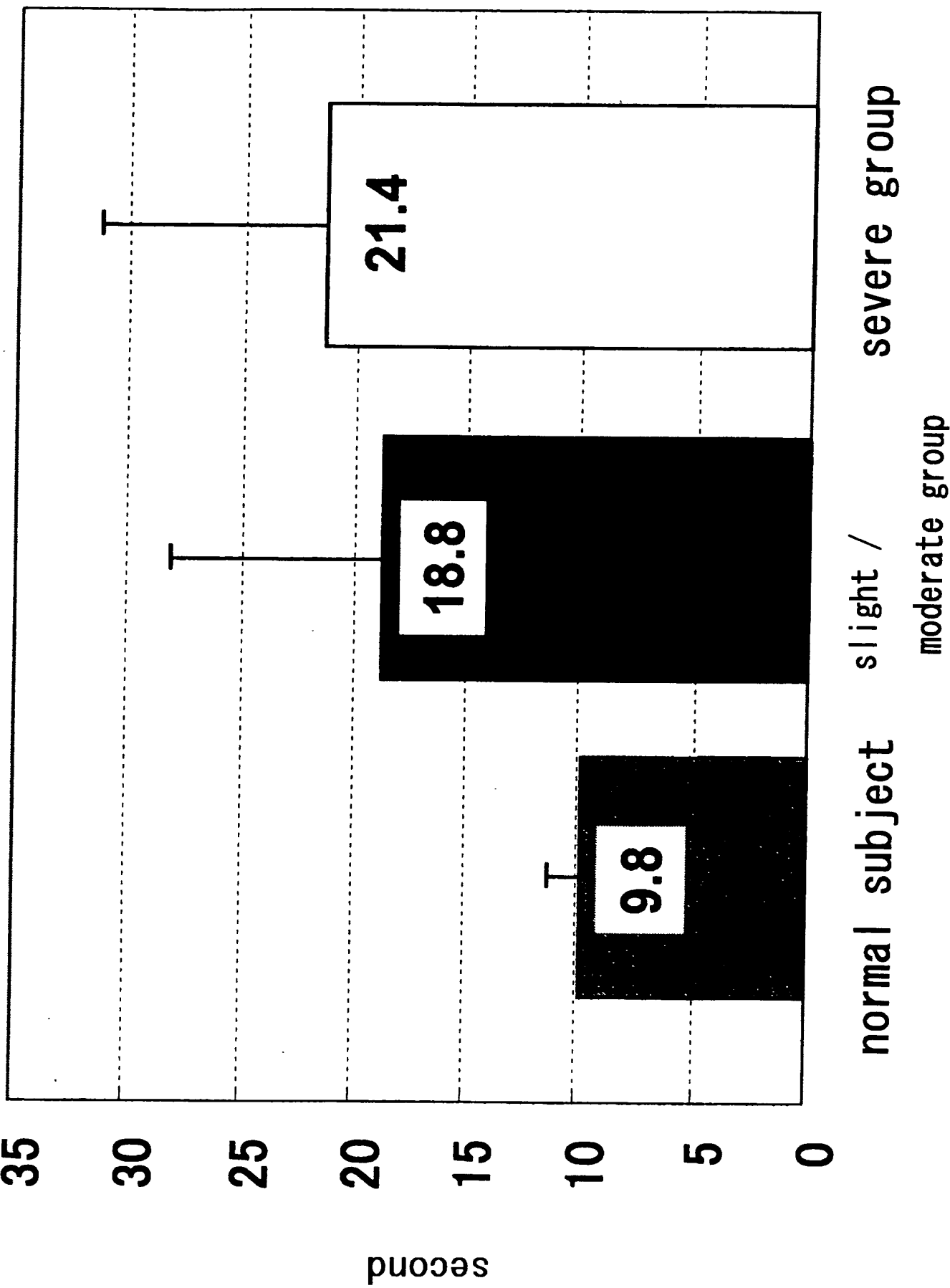


Fig. 14

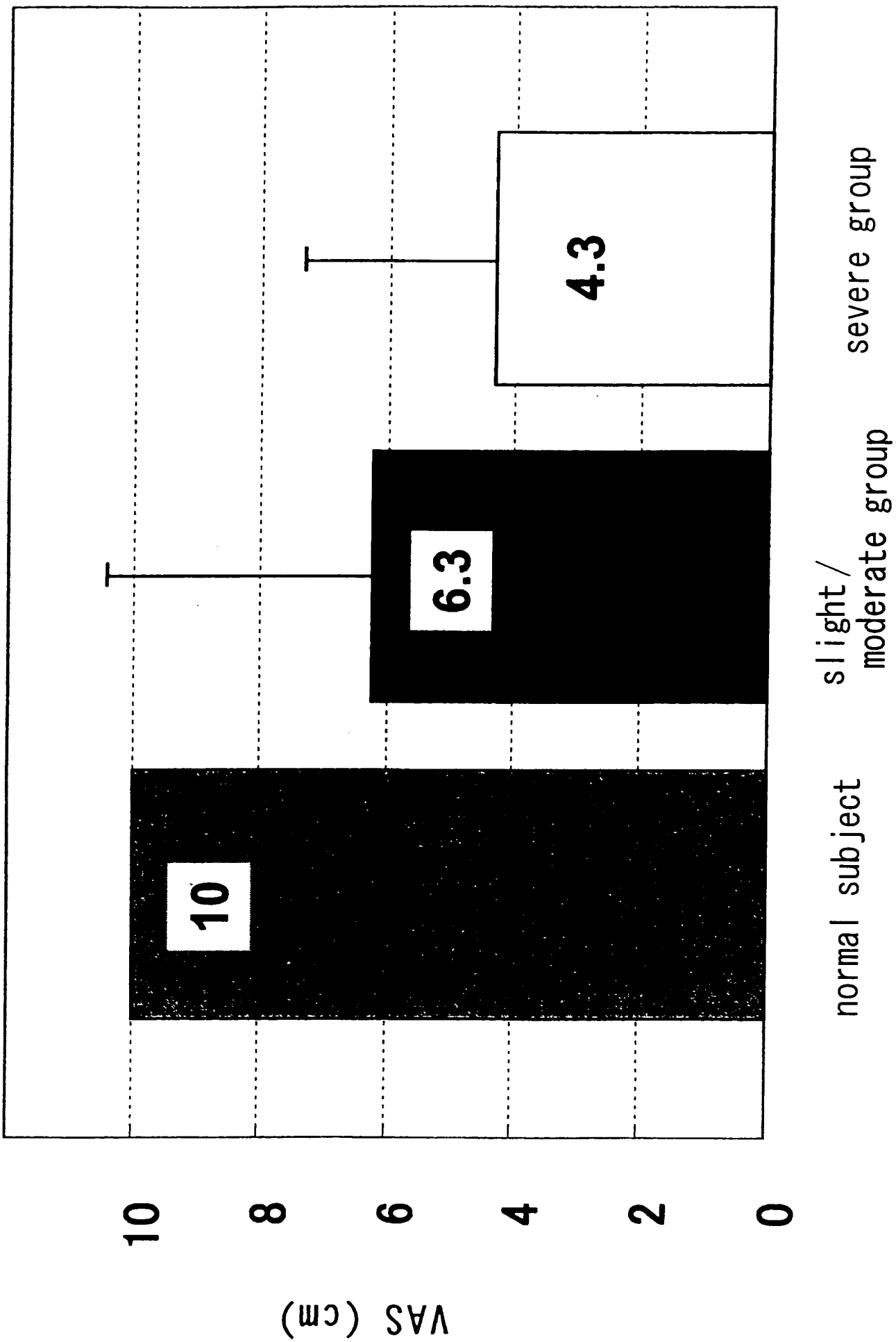


Fig. 15

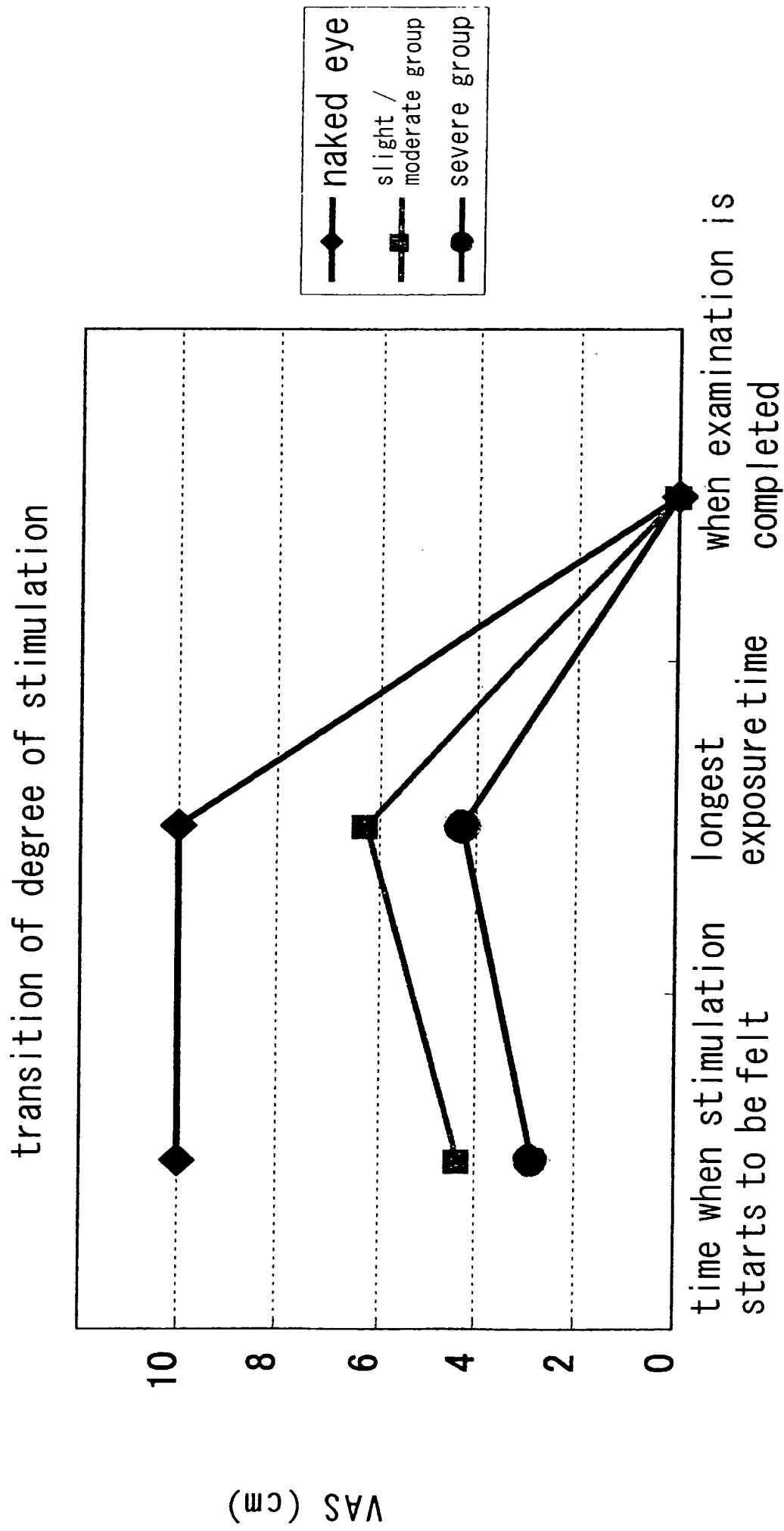


Fig. 16

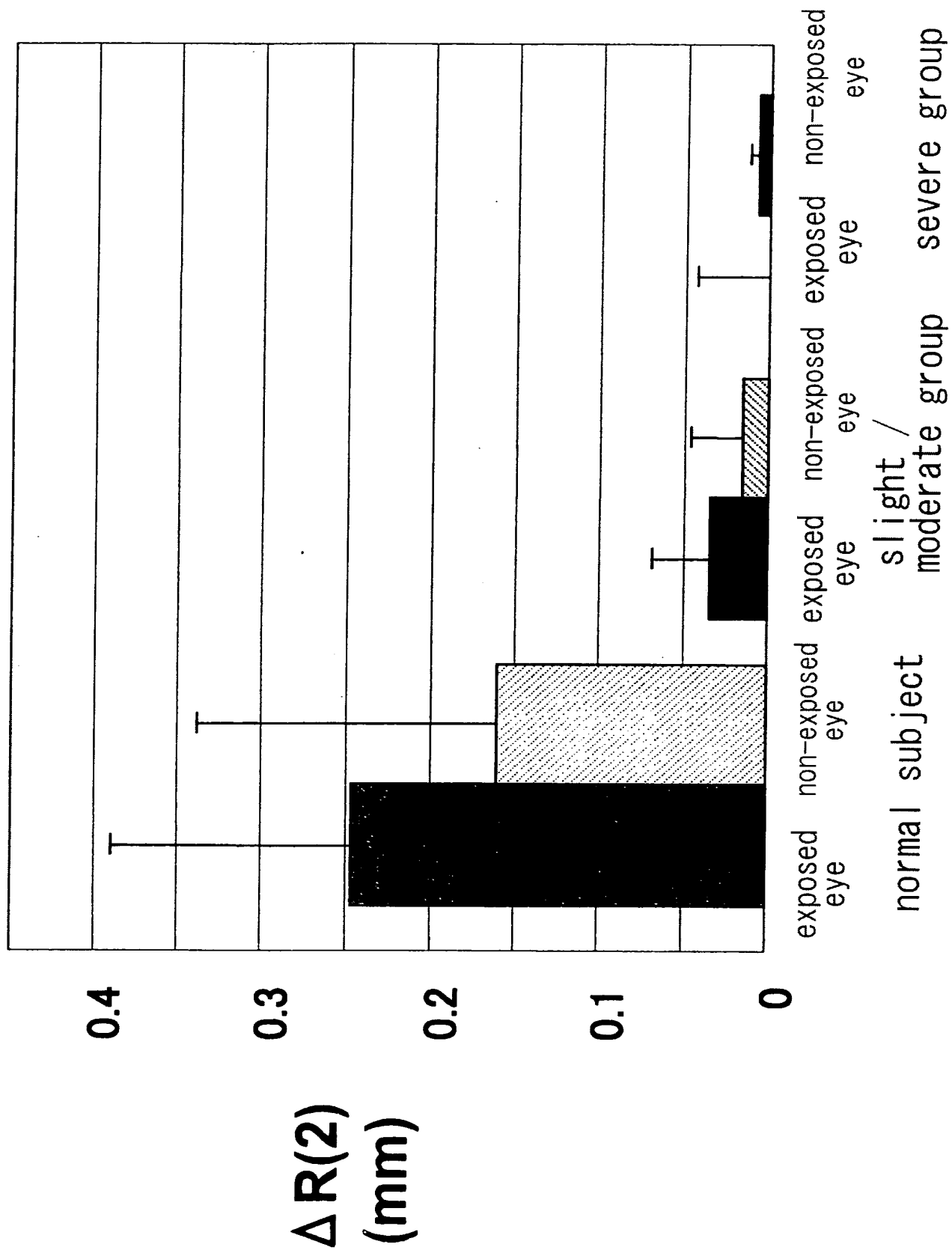


Fig. 17

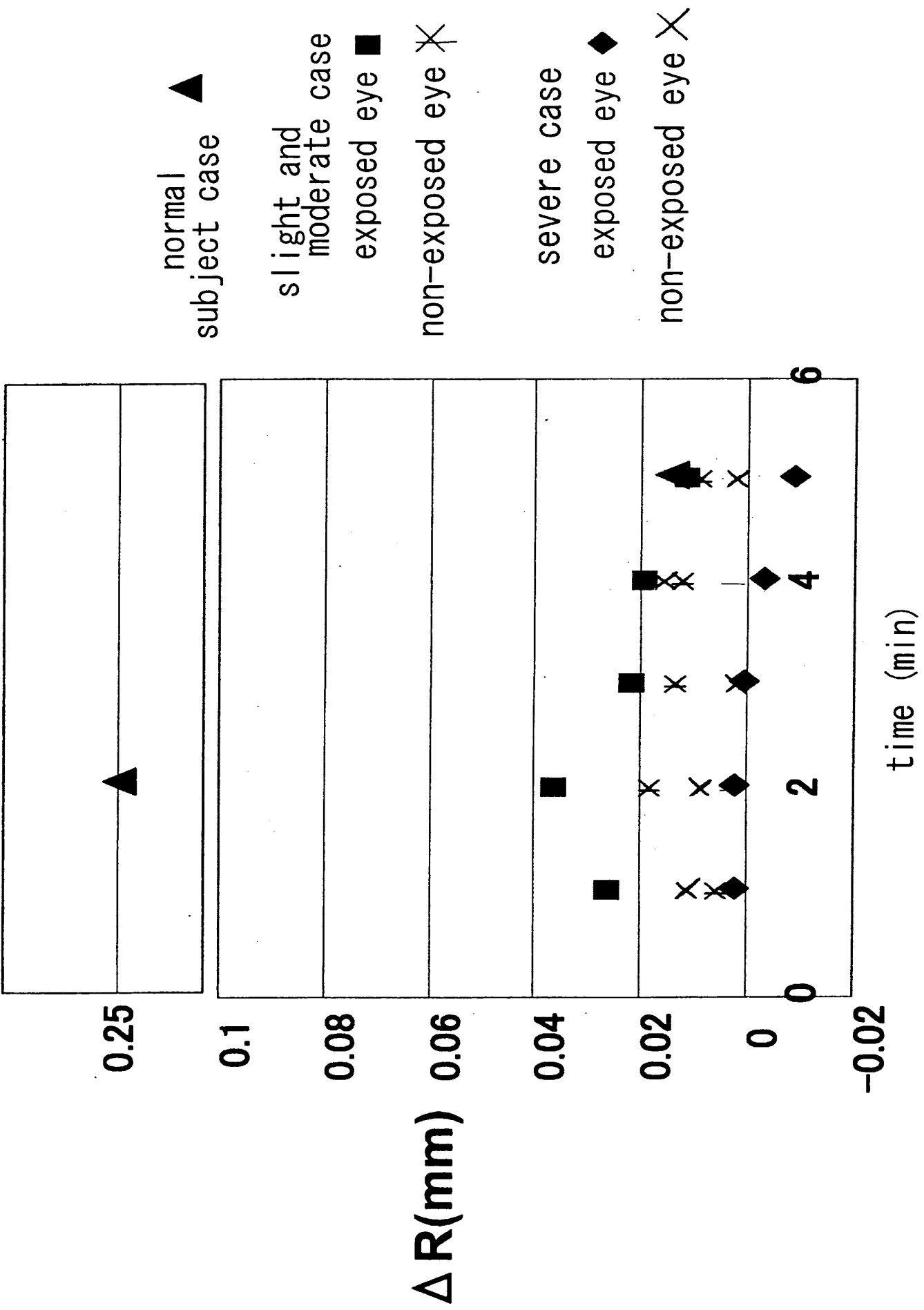
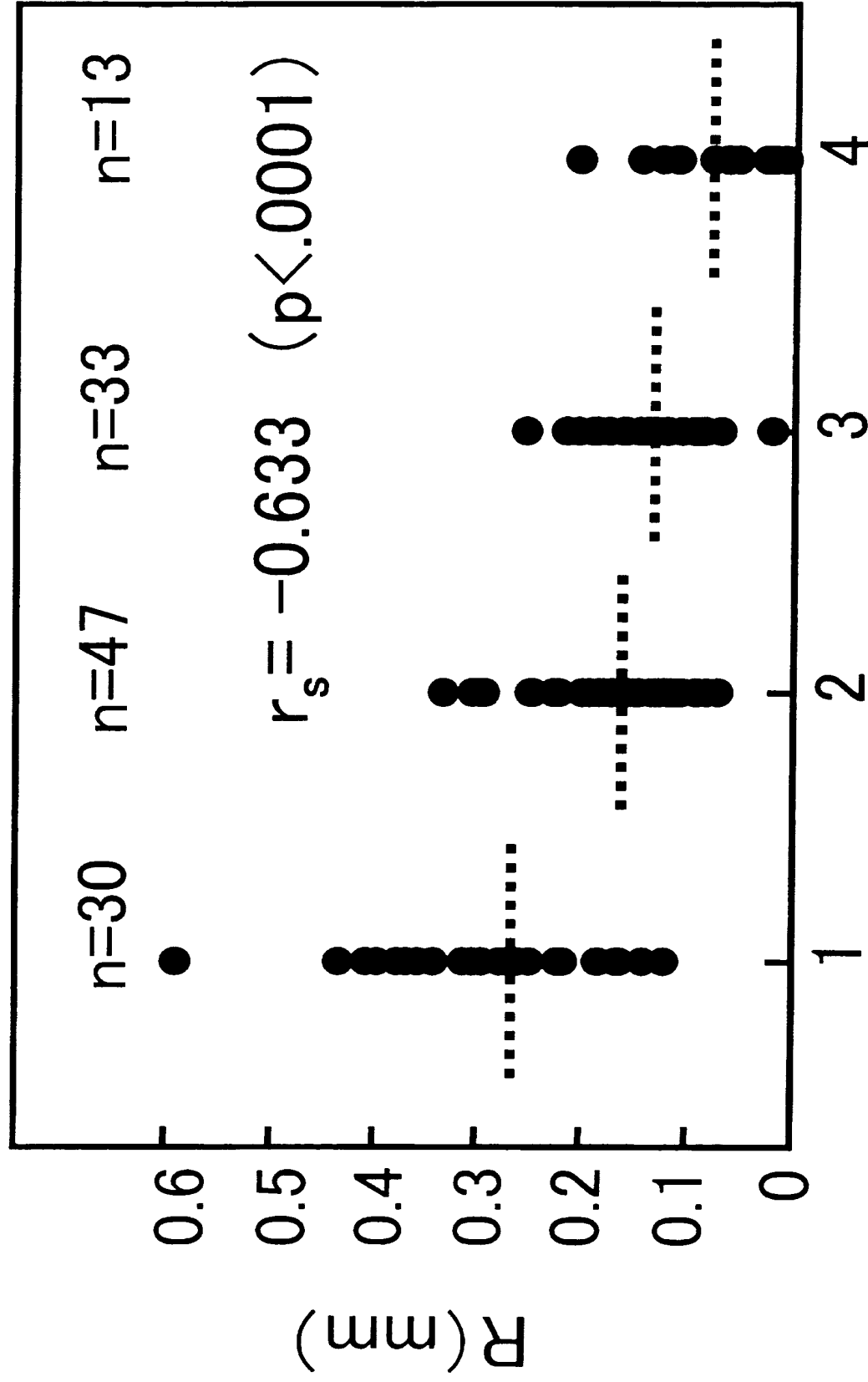


Fig. 18

relationship between R and Grade



extensibility (Grade) of tear lipid layer

Fig. 19

change of R before and after exposure
of lachrymatory component

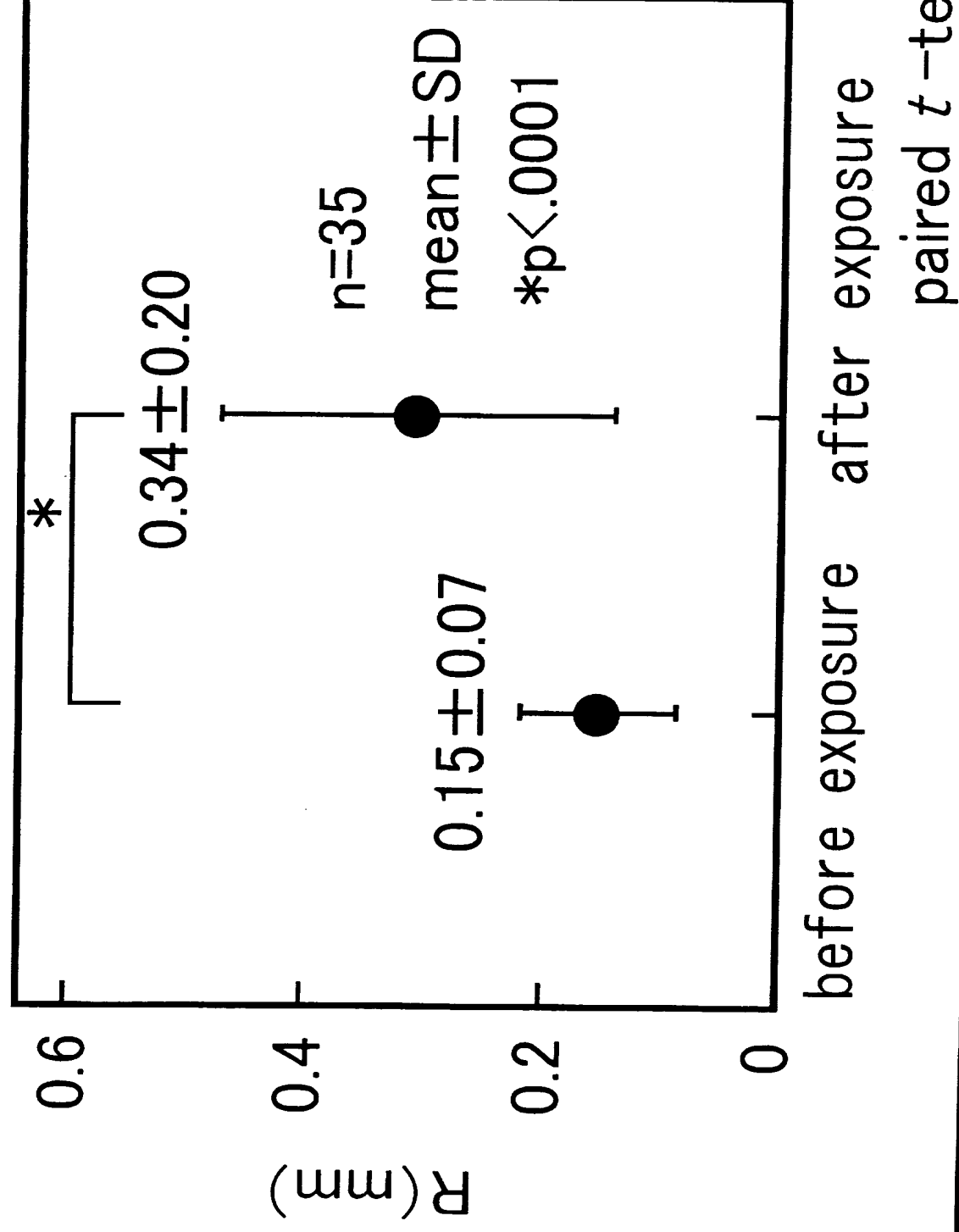
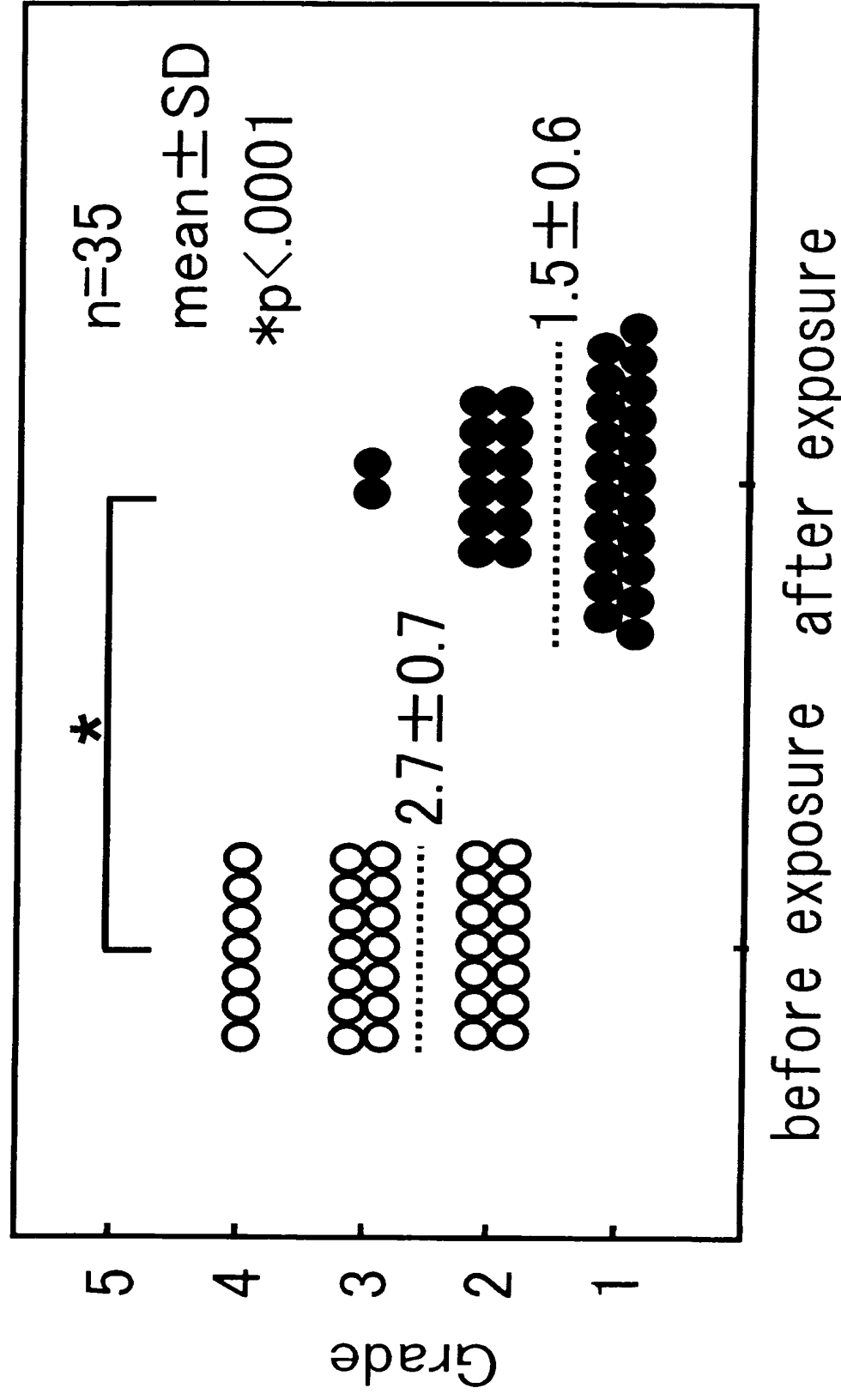


Fig. 20

change of Grade before and after exposure
of lachrymatory component

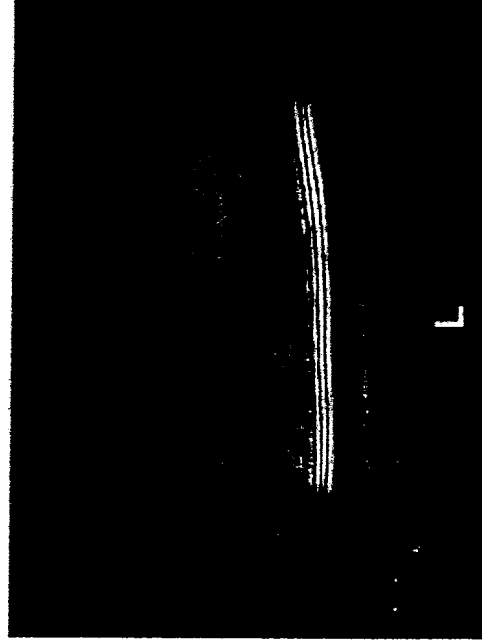


Wilcoxon signed-rank test

Fig. 21

relationship between change of R and change of R
(representative example)

R=0.02 mm

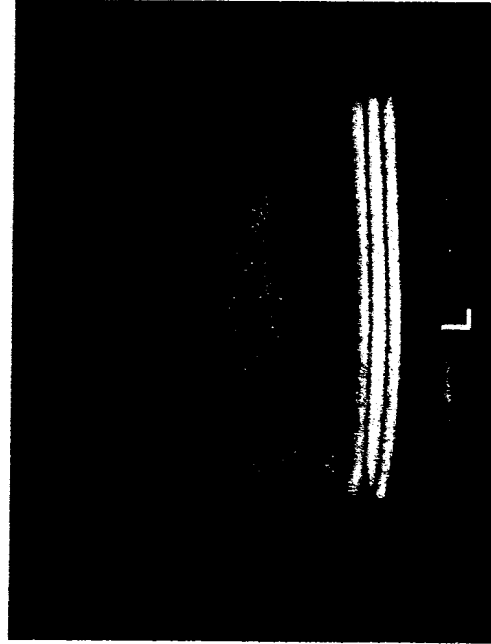


before
exposure

Grade 3

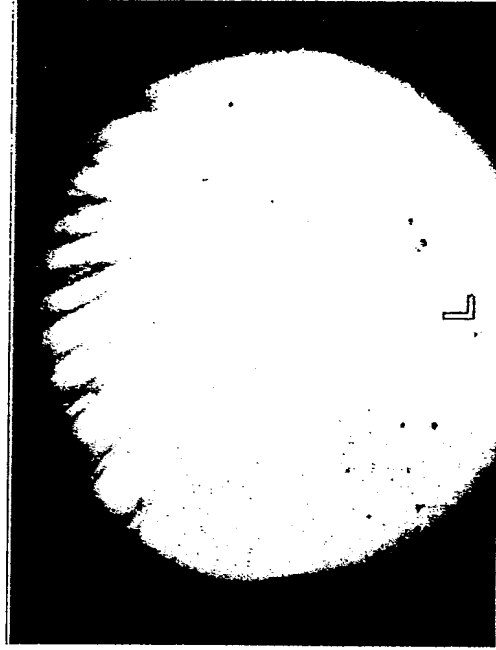


R=0.27 mm



after
exposure

Grade 1



before exposure

Fig. 22

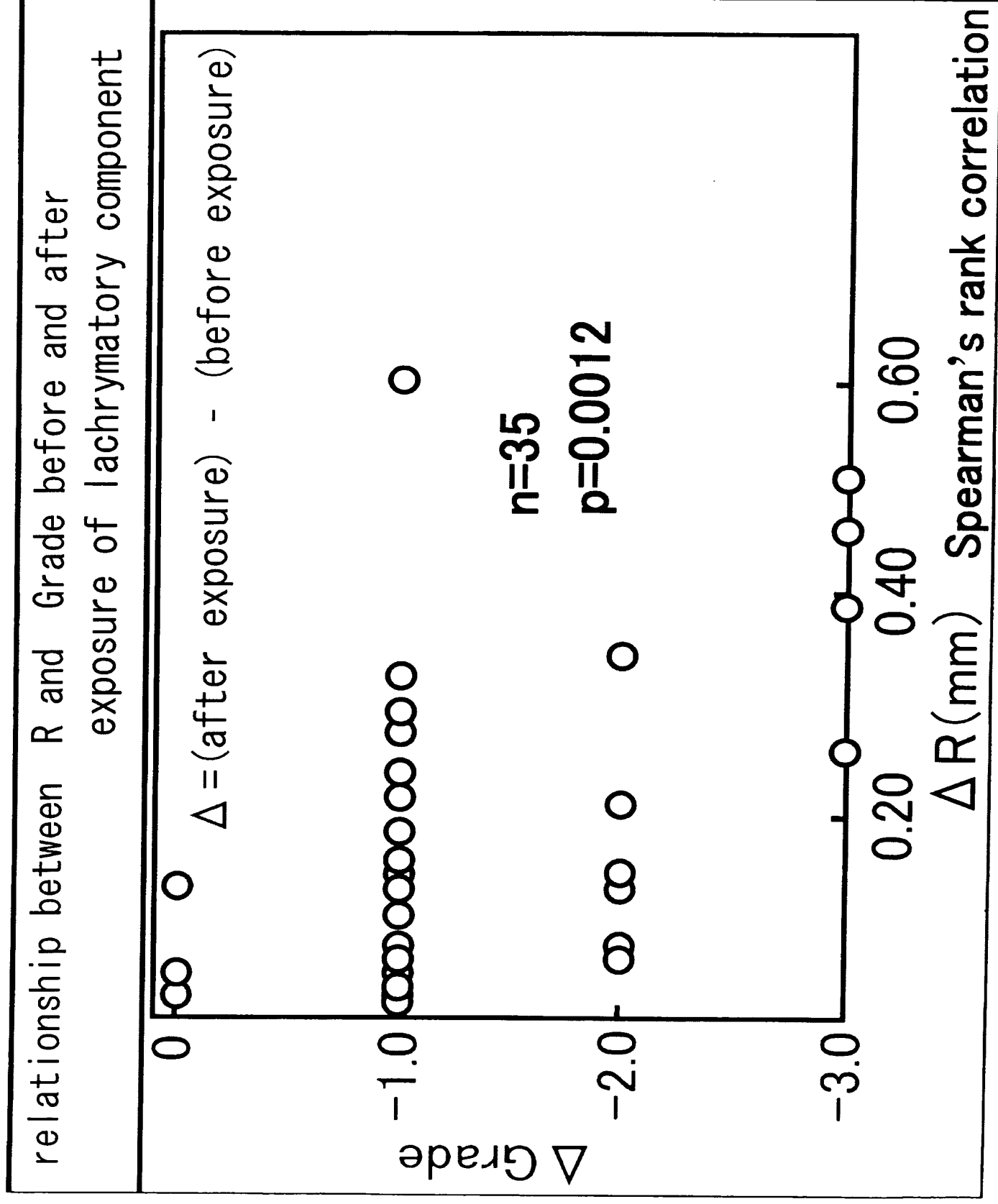


Fig. 23

change of R before and after exposure of
lacrimary component

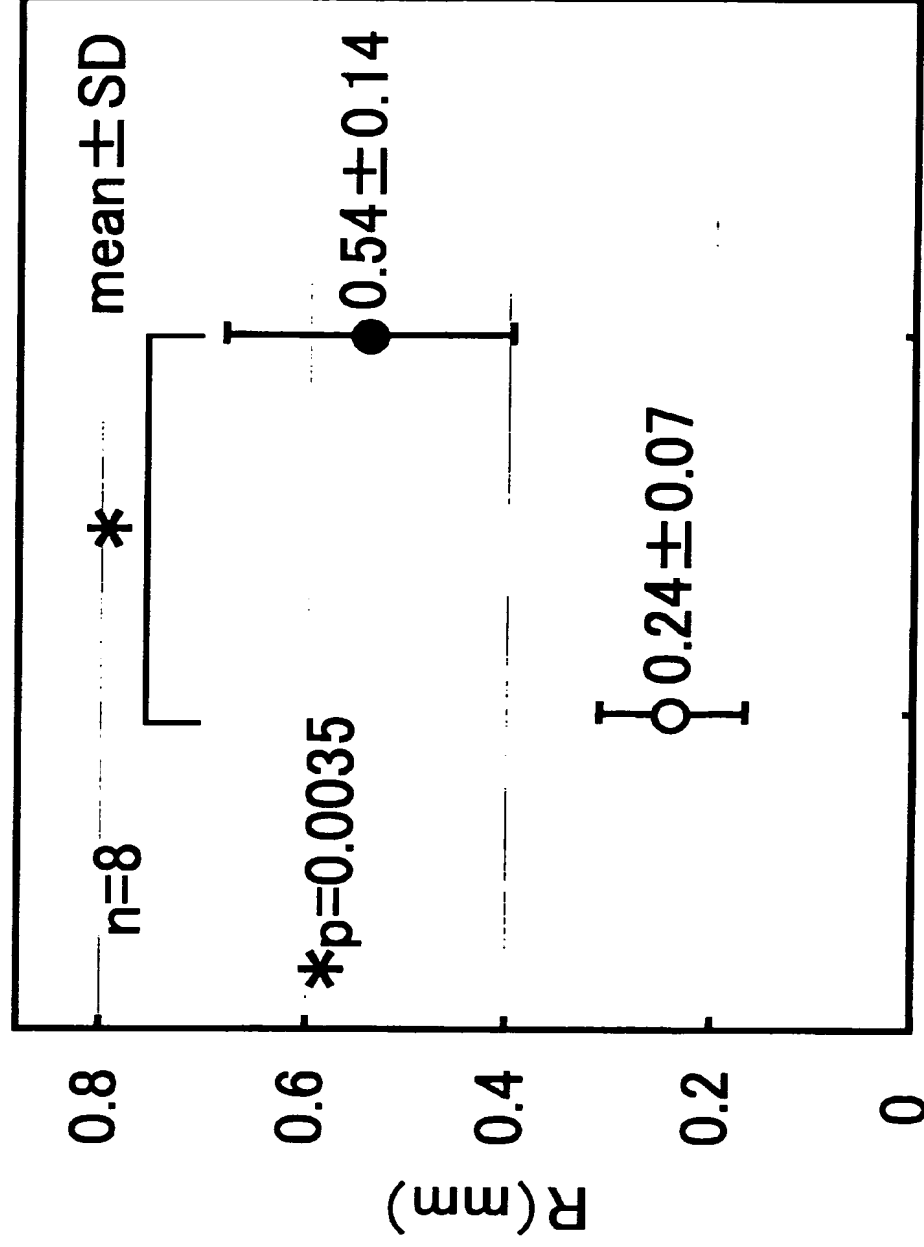


Fig. 24

change of tear specular image on SCL before and after exposure of lachrymatory component

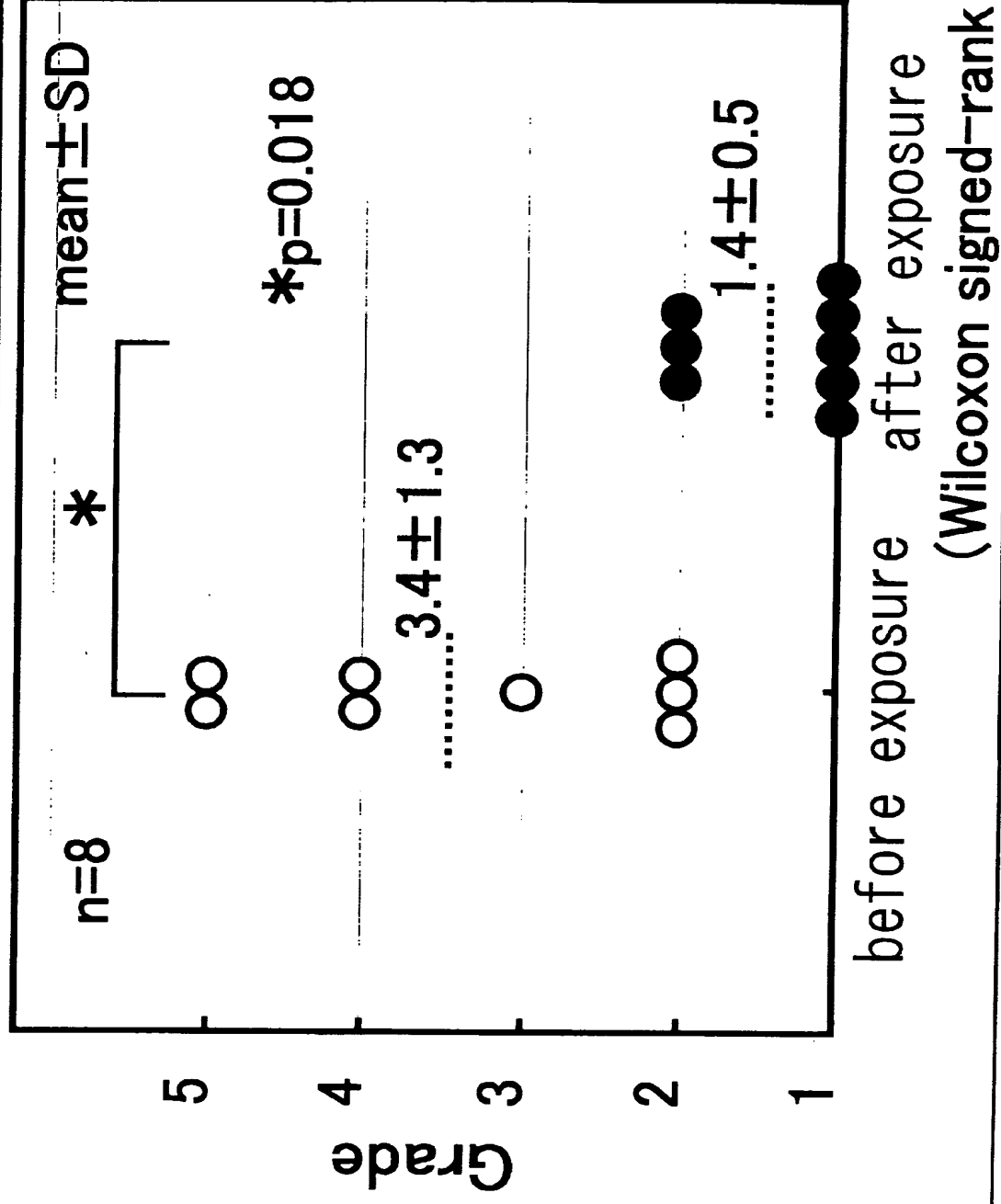
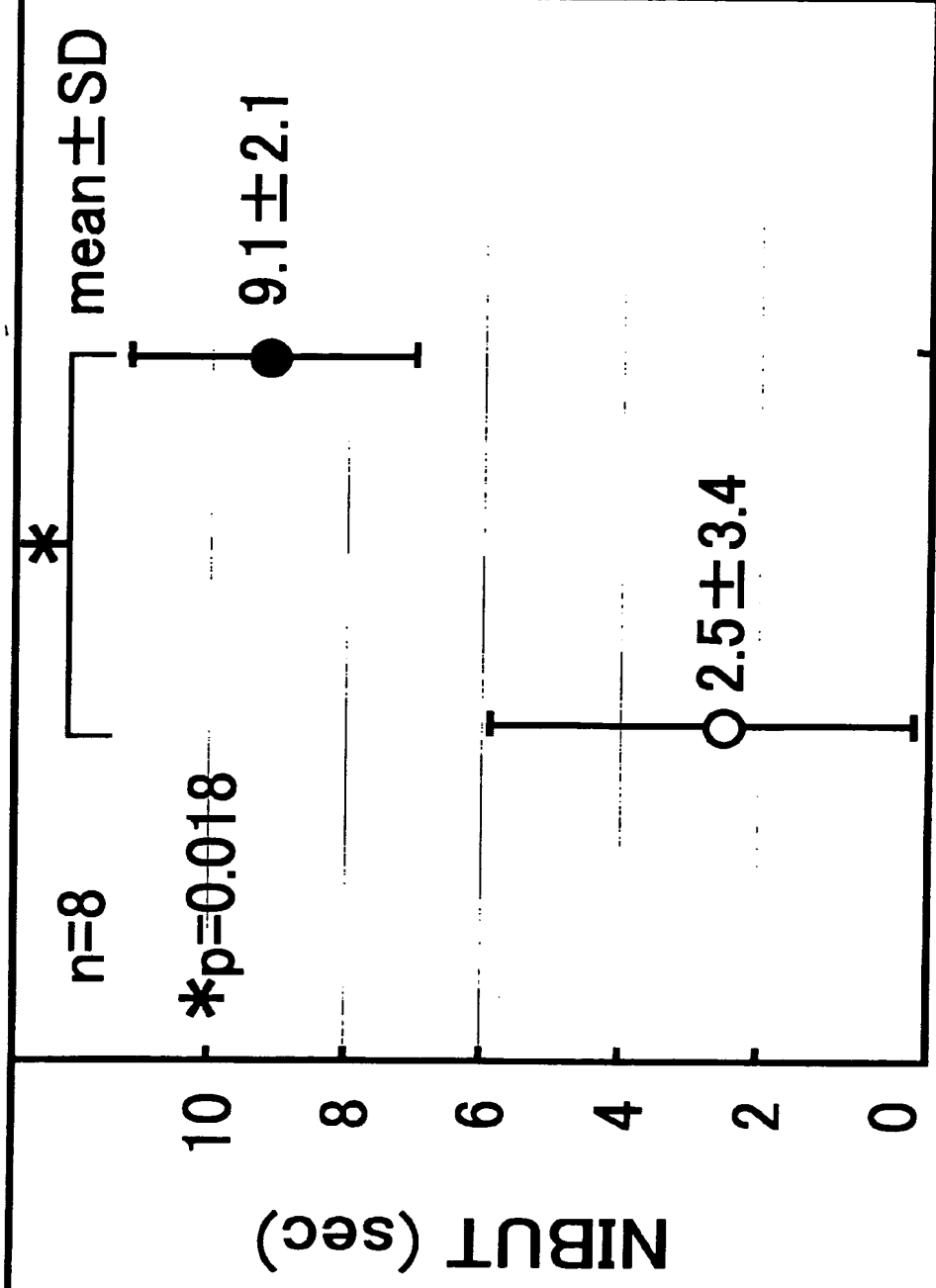


Fig. 25

change of NIBUT on SCL before and after exposure of
lacrymatory component

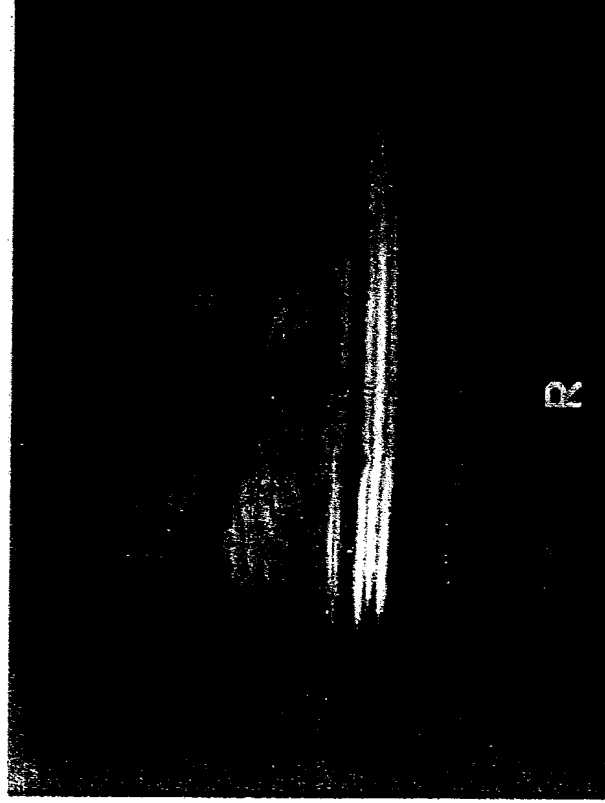


before exposure after exposure
(Wilcoxon signed-rank test)

Fig. 26

change of R before and after exposure of lachrymatory component
(representative examples)

before
exposure



$R=0.16$ mm

after
exposure

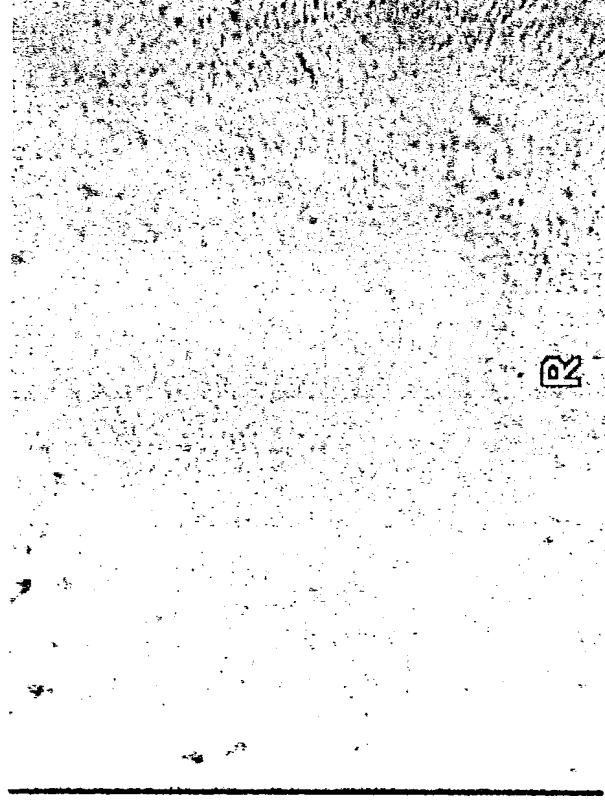


$R=0.57$ mm

Fig. 27

change of tear specular image on SCL before and after exposure
of lachrymatory component (same examples, representative examples)

before
exposure



after
exposure



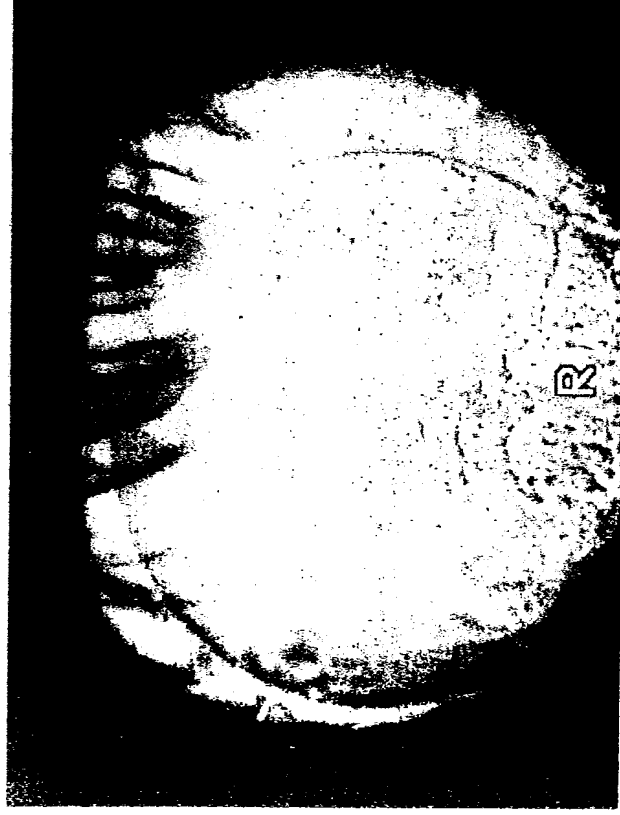
Grade 5

Grade 1

Fig. 28

change of NIBUT on SCL before and after
exposure of lachrymatory component
(same examples, representative examples)

before
exposure



NIBUT = 0 秒

before
exposure



NIBUT = 10 秒

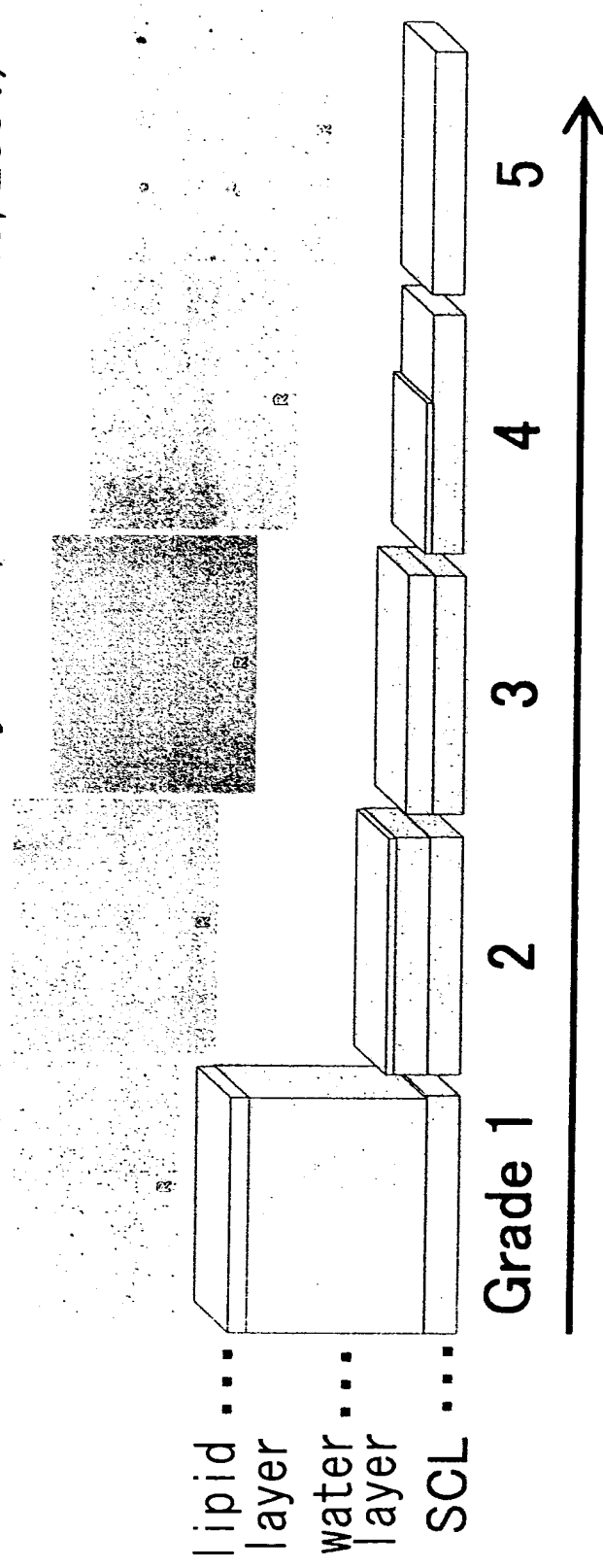
Fig. 29

Evaluation of thickness and stability of tear on SCL

by DR-1[®] (Kowa)

① Grade classification of tear specular image on SCL

(Maruyama K, et al. IOVS 45, 2004)



② measurement of NIBUT (Not-invasive breakup time)